

IN THE CLAIMS

This listing of the claims replaces all prior versions of the claims in the application.

1. (Withdrawn) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

- a) an amino acid sequence consisting of SEQ ID NO:1,
- b) a naturally occurring amino acid sequence having at least 80% sequence identity to an amino acid sequence consisting of SEQ ID NO:1,
- c) a biologically active fragment of an amino acid sequence consisting of SEQ ID NO:1, and
- d) an immunogenic fragment of an amino acid sequence consisting of SEQ ID NO:1.

2. (Previously Presented) An isolated antibody which specifically binds to a polypeptide selected from the group consisting of:

- a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1,
- b) a polypeptide comprising a naturally occurring amino acid sequence at least 80% identical to the amino acid sequence of SEQ ID NO:1, wherein the polypeptide binds calcium,
- c) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, wherein the fragment binds calcium,
- d) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, wherein the fragment comprises residues A90-L102 of SEQ ID NO:1,
- e) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, wherein the fragment comprises residues D213-Y225 of SEQ ID NO:1,
- f) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, wherein the fragment comprises residues D254-V266 of SEQ ID NO:1, and
- g) a fragment of a polypeptide having the amino acid sequence of SEQ ID NO:1, wherein the fragment comprises residues D290-I302 of SEQ ID NO:1.

3. (Previously Presented) A composition comprising the antibody of claim 2 and a reporter molecule.
4. (Currently Amended) A composition comprising the antibody of claim 2 and an acceptable excipient.
5. (Original) The antibody of claim 2, wherein the antibody is an antagonist of a polypeptide comprising the amino acid sequence of SEQ ID NO:1.
6. (Previously Presented) A method of preparing a polyclonal antibody with the specificity of the antibody of claim 2, the method comprising:
 - a) immunizing an animal with a polypeptide having the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,
 - b) isolating antibodies from the animal, and
 - c) screening the isolated antibodies with the polypeptide, thereby identifying a polyclonal antibody which specifically binds to the polypeptide.
7. (Previously Presented) A polyclonal antibody produced by the method of claim 6.
8. (Previously Presented) A method of preparing a monoclonal antibody with the specificity of the antibody of claim 2, the method comprising:
 - a) immunizing an animal with a polypeptide having the amino acid sequence of SEQ ID NO:1, or an immunogenic fragment thereof, under conditions to elicit an antibody response,
 - b) isolating antibody-producing cells from the animal,
 - c) fusing the antibody-producing cells with immortalized cells in culture to form monoclonal antibody-producing hybridoma cells,
 - d) culturing the hybridoma cells, and
 - e) isolating from the culture monoclonal antibody with the specificity of the antibody of claim 2.

9. (Previously Presented) A monoclonal antibody produced by the method of claim 8.
10. (Previously Presented) The antibody of claim 2, wherein the antibody is:
- a) a chimeric antibody,
 - b) a single chain antibody,
 - c) a Fab fragment,
 - d) a F(ab')₂ fragment, or
 - e) a humanized antibody.
11. (Original) An antibody of claim 10, wherein the antibody is produced by screening a Fab expression library.
12. (Original) An antibody of claim 10, wherein the antibody is produced by screening a recombinant immunoglobulin library.
13. (Withdrawn) A method for detecting a polypeptide comprising the amino acid sequence of SEQ ID NO:1 in a sample, the method comprising:
- a) incubating the sample with the antibody of claim 2 under conditions to allow specific binding of the antibody and the polypeptide, and
 - b) detecting specific binding, wherein specific binding indicates the presence of a polypeptide comprising the amino acid sequence of SEQ ID NO:1 in the sample.
14. (Withdrawn) A method of purifying a polypeptide comprising the amino acid sequence of SEQ ID NO:1 from a sample, the method comprising:
- a) incubating the antibody of claim 2 with the sample under conditions to allow specific binding of the antibody and the polypeptide, and
 - b) separating the antibody from the sample and obtaining the purified polypeptide comprising the amino acid sequence of SEQ ID NO:1.

15.-20. (Canceled)

21. (Currently Amended) A composition of claim 4, ~~further comprising~~ wherein the antibody is joined, either covalently or non-covalently, with a label.

22. (Currently Amended) A composition comprising the polyclonal antibody of claim 7 and a ~~suitable carrier~~ an excipient.

23. (Currently Amended) A composition comprising the monoclonal antibody of claim 9 and a ~~suitable carrier~~ an excipient.

24. (Previously Presented) An isolated antibody which specifically binds to a polypeptide comprising the amino acid sequence of SEQ ID NO:1.

25. (Previously Presented) An isolated antibody of claim 2, which specifically binds to a polypeptide selected from the group consisting of:

- a) a polypeptide consisting of the amino acid sequence of SEQ ID NO:1,
- b) a polypeptide consisting of residues A90-L102 of SEQ ID NO:1,
- c) a polypeptide consisting of residues D213-Y225 of SEQ ID NO:1,
- d) a polypeptide consisting of residues D254-V266 of SEQ ID NO:1, and
- e) a polypeptide consisting of residues D290-I302 of SEQ ID NO:1.

26. (Previously Presented) An isolated antibody of claim 2, which specifically binds to a polypeptide selected from the group consisting of:

- a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1, and
- b) a polypeptide comprising a naturally occurring amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:1, wherein the polypeptide binds calcium.